PART I – THE SCHEDULE

SECTION C - PERFORMANCE WORK STATEMENT (PWS)

C.1 BACKGROUND

Structures erected and equipment emplaced by Lockheed Martin Advanced Environmental Systems (LMAES) at Pit 9 have no current or future use and are impeding the ability to conduct remediation of the Subsurface Disposal Area (SDA) of the Radioactive Waste Management Complex (RWMC) at the Idaho National Laboratory (INL) site. The structures and equipment must be dismantled and removed from the SDA to allow necessary environmental restoration work to continue.

Ongoing activities at the RWMC include:

- Low-Level radioactive waste disposal
- Vapor Vacuum Extraction with Treatment (VVET) of Organic Contamination in the Vadose Zone (OCVZ); Unit F is located approximately 200 ft. west of the Remediation Treatment Facility
- Accelerated Retrieval Project (ARP) I and II – exhumation of buried waste, conducted within a fabric sided enclosure
- Advanced Mixed Waste Treatment Project (AMWTP) – retrieval, characterization, packaging, and shipment of transuranic waste stored above ground in an earthen berm (within a retrieval enclosure)

Maps and drawings are contained in Section J, Attachment F, "Maps, Photographs, and Drawings for Information Only."

C.2 PERFORMANCE OBJECTIVE

The performance objective for this Task Order is to achieve the desired end state for the LMAES Pit 9 Project facilities area, both inside the SDA, and outside of the SDA, no later than **October 31, 2007**. The performance standard is approval by DOE as specified in Section F.4, "Declaration of Project Completion".

C.3 END STATE

The end state for the D&D of the LMAES Pit 9 Structures and Equipment Project shall be to leave the Pit 9 area in a suitable condition for future remediation and for safe access by RWMC personnel when performing surveillance and maintenance activities.

The project site is divided into two distinct areas, Outside of the SDA, and Inside the SDA. The two areas are divided by a flood control device commonly referred to as the SDA Berm, herein referred to as "the berm." The area Outside of the SDA lies north of the berm, and may be referred to as the Administration Area. The area Inside the SDA

lies south of the berm, and includes Pit 9, the Retrieval Building, and the Treatment Building, most notably. **An active electrical power line is located within the berm; intrusion into the berm shall be avoided in the interest of protecting the line and avoiding the hazards of high voltage power.**

- **Outside of the SDA** (Administration Area) - All structures and appurtenances, equipment, on grade slabs and footings to a depth of 3' below grade shall be removed and the area restored to a smooth contour consistent with the surrounding area, including but not limited to all directions specified in Section C, Attachment A, "Description of Outside of the SDA (Administration Area)" to this PWS. This shall be the end state for the entire Administration Area, with the exception of exclusions, items, and facilities, etc. specified in Section C, Attachment A.

- **Inside of the SDA** - All structures, appurtenances, and equipment shall be removed to existing grade, including but not limited to all directions specified in Section C, Attachment B, "Description of Inside the SDA," to this PWS. On grade slabs and footings shall remain in place. This shall be the end state for inside of the SDA, with the exception of exclusions, items, facilities, etc. specified in Section C, Attachment B.

- **Disposition of Materials** – All salvageable materials shall be removed from the INL site. All such salvageable materials shall become the property of the Pit 9 D&D Contractor upon removal. All demolition debris, except for the alternatives described below, shall be taken to the Central Facilities Area (CFA) landfill for disposal. DOE is interested in an approach that provides best value, minimizes unnecessary use of the CFA landfill, and supports the principals of waste minimization. The following options are provided for your consideration, and apply to concrete debris generated from the demolition of the RTF, as well as from the Administration Area Facilities:

    1. Concrete debris may be used to fill sub-grade cells or trenches in the Remediation Treatment Facility, as well as vaults and manholes located inside the SDA. Reinforcement steel shall be trimmed to minimize the potential to create voids that may lead to future subsidence. Fill material used to fill the RTF cells shall be well consolidated and brought to an even and stable surface. To the degree feasible, manholes in the Administration Area may also be backfilled with concrete debris to within three feet of grade—consistent with the requirements set forth for **Outside of the SDA.**

    2. Concrete debris not used as described in option 1 above shall be reduced to rubble and stockpiled for future use at the SDA. The main restriction would be to process the material to a form where all the reinforcement steel is removed. The sizes of concrete rubble would be variable. Any stockpile area that would disturb natural drainage and result in ponding shall be avoided. Preferred areas for the stockpile include the Remediation Treatment Facility (RTF) building grade slab (to the degree that it would not interfere with fulfilling requirements for the D&D of the RTF) and a location within the

Administration Area that does not interfere with access to facilities/items that are to be left in place.

C.4 COORDINATION WITH ON-GOING RWMC/SDA AND AMWTP ACTIVITIES

Access to the LMAES Pit 9 facilities area shall be from the RWMC north perimeter road and gate. If needed, access via the RWMC/SDA may be arranged through coordination with the ICP contractor. The Pit 9 D&D Contractor shall ensure effective communication and coordination with the ICP contractor concerning activities that are under execution by the Pit 9 D&D contractor.

The technical approach taken for D&D of the structures shall preclude the potential of flying debris outside the immediate D&D Project area. If explosives are used, the impacts of blasting will have to be assessed on the AMWTP and ARP exhumations, OCVZ operations, delicate radiation and characterization equipment; and other activities conducted at the RWMC. Also, dust suppression will be required as is typically employed in construction and D&D projects.

C.5 AVAILABILITY OF SITE SERVICES

The Pit 9 D&D Contractor shall ensure appropriate services are provided for all D&D activities commensurate with the planned schedule for demolition. The following services are available from Battelle Energy Alliance, LLC (BEA) or CH2M Hill Washington Group, Idaho LLC (CWI) as listed below:

Service Area		Point of Contact
Government Furnished Services and/or Items		DOE
Electrical		BEA
Water – construction water		BEA
Telecommunications – two way radios		BEA
Landfill and Waste Disposal		
	Clean waste	BEA
	Hazardous waste	CWI
	Waste Generator Services	CWI
	Laydown Area for Concrete Debris	DOE
Roads and Grounds		BEA
	Borrow Pit use	
Environmental		BEA
	Fugitive dust	
	Spill Notification	
	Spill Prevention Control and Counter Measures Plan	

Service Area		Point of Contact
	Hazardous Waste Management Standards for Large Quantity Generators	
Emergency Response and Preparedness		BEA
	Event Classification and notifications	
	Alarm Response *	
	Evacuation *	CWI
	Training	
	Fire/emergency services	
Health and Safety		BEA/CWI
	Stop Work Authority	
	Training	
Safeguards and Security		BEA
	Badging	
	Drug Testing	
	Foreign Nationals	
	RWMC Access	
	Accountability	

* BEA is the lead for Emergency Response and Preparedness, CWI has a lead role with respect to communications and evacuations at the SDA

	Name	Phone	e-mail
DOE	Kevin O'Neill	208-526-5455	ONEILLKC@ID.DOE.GOV
BEA	Gary Marshall	208-526-7666	Gary.Marshall@INL.GOV
CWI	Eugene Balsmeier	208-526-7445	Eugene.Balsmeier@icp.doe.gov

The INL and ICP Contractors are responsible for the safe conduct of operations at the INL and within facilities each occupies or controls. The Pit 9 D&D Contractor's work at the INL and any of these facilities shall be performed in a manner that is consistent with the procedures established by the INL and ICP Contractors that apply to site access controls, safeguards and security requirements. The Pit 9 D&D Contractor shall develop an interface agreement with the appropriate INL and ICP Contractor, subject to DOE-ID approval, on matters not governed by these procedures or where deviation from these procedures is necessary. The Pit 9 D&D Contractor shall also work cooperatively with the INL and ICP Contractors to clearly: 1) define, demarcate and document the boundaries within which work will be conducted; and, 2) define and document the respective roles and responsibilities with the INL and ICP Contractors relative to managing that work control boundary. Unless otherwise agreed, INL and ICP Contractor policies and procedures shall apply to the conduct of work outside your work boundary and your policies and procedures shall govern within that boundary. The Pit 9 D&D Contractor is responsible for the training and safety of individuals working for it and is obligated to ensure their fitness for duty. The Pit 9 D&D Contractor shall also coordinate these activities and plans with the appropriate INL and ICP Contractor authority for the area in which it will be performing work and seek the approval of that authority prior to commencing work.

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SECTION C - ATTACHMENT A - DESCRIPTION OF OUTSIDE OF THE SDA (ADMINISTRATION AREA)

DOE believes the following descriptions and documentation provided represents the most recent and appropriate documentation available for the sites/facilities identified in this Task Order.

ADMINISTRATION AREA FACILITIES

The Administration Area Facilities include buildings, trailers, tanks, concrete pads and miscellaneous structures, overhead pipe and associated racks, underground utilities, and miscellaneous pieces of equipment, located in the Administration Area to the north of the Retrieval and Treatment buildings. With the exception of the Pit 9 Substation, the Pit 9 Well and Well House, and any active telecommunication lines, all equipment, structures, and utilities are to be removed, salvaged, or disposed. Specific structures include:

Utility Building: The Utility Building is a single story pre-engineered steel frame and steel sided building, which houses numerous pieces of installed and stored equipment. Building dimensions are approximately 123 ft. by 80 ft., with an eave height of 24 ft and 2/12-pitch gable end steel roof. Installed equipment includes:

- Large Caterpillar Diesel Generator Set
- Diesel Firewater Pump
- Diesel Day Tanks
- Two Large Steam Boilers
- Smaller Steam Boiler
- Deaerator
- Compressed Air Receivers
- Air Compressor
- Air Dryer
- Electrical Switch Gear
- Motor Control Center
- Chemical Transfer Pump

Stored Equipment Includes, but is not limited to:

- Weighted Curtains for Retrieval Building
- Box/Crate Lid (for waste boxes)
- Misc. valves, cameras, and hardware

Maintenance Building (Yurt) Foundation and Pad: An oval shaped concrete foundation and pad measuring approximately 60 ft. by 80 ft,. A concrete bottled gas storage area is constructed adjacent to the building.

Fire/Potable Water Tank: Approximately 1,000,000 gallon steel water tank and concrete foundation.

Diesel Storage Tank: Approximately 75,000 gallon steel diesel storage and concrete foundation.

Cooling Tower (CT-8001): Cooling tower with a footprint of approximately 20 ft. by 40 ft., rests on concrete piers.

Cooling Tower Building Foundation and Pad: Concrete foundation and pad, approximately 20 ft. by 40 ft., electrical switchgear for the Cooling Tower.

Truck Offloading Facility: Approximate 64 ft. by 80 ft. concrete floor and sumps, chemical transfer piping and pumps, steel canopy/roof structure (no walls).

Overhead Pipe Rack and Piping: Approximately 700 running feet of steel overhead pipe rack and piping; approximately ten feet in width, carries pipe through the administrative area to the bulk reagent holding tanks and the treatment building.

Administration Trailer Footings: Concrete footings previously used to support a doublewide trailer that measured approximately 32 ft. by 60 ft.

Chemical Treatment Skids: Approximately fifteen skid mounted chemical treatment systems/items, are located outside in the yard area. A 4000-gallon stainless steel storage tank rests amidst the treatment skids.

Box Trailer: An empty 40 ft. long box trailer is parked outside the Utility Building.

Vehicle Maintenance Shed: A wooden shed once used for vehicle maintenance sits at the northeast corner of the Administrative Area. The shed rests on a concrete pad measuring approximately 40 ft. by 50 ft. Several seemingly empty drums and broken blue Styrofoam insulation boards litter the shed.

Wooden Shed: A wooden shed approximately 30 ft. by 30 ft. with a plywood floor and exterior deck rests in the Administrative Area and contains an unknown quantity of small diameter plastic pipe.

Power Poles: Existing power poles along the project site perimeter, pole numbers: 42-131-4, 5, 6, & 7, 42-131-5A & 42-131-5B, and 42-133-4 & 42-133-5 (refer to Power Management Drawing No. 442635, Sheet 3), are under the control of INL Power Management (Scoville Power & Light) and shall remain in place. INL Power Management will isolate and disconnect all electrical power proceeding from these poles into the LMAES Pit 9 facilities. Temporary power lines (drops) shall be disconnected by INL Power Management such that they can be easily and safely removed by the D&D contractor. The poles and associated high voltage lines will remain in place for possible future use. Transformers are to be dispositioned by the D&D Contractor. Temporary

power poles, and poles used for area lighting within the project site shall be removed. The Pit 9 D&D Contractor is responsible for electrical safety for all project activities, and shall ensure that power to the project site and facilities is properly locked or tagged out, and that zero energy checks are conducted prior to performing work on electric equipment or systems.

Pit 9 Substation: The Substation will remain as is for future use. Power Management will disconnect the conductors that feed the LMAES Pit 9 facilities from the substation so that the D&D contractor can safely remove them. Power Management will also disconnect the control lines (wires) from the substation so that the D&D contractor can safely remove or abandon them without having to perform work within the substation.

Cargo Container: A yellow sea-land container rests on the SDA berm near the northwest corner of the Retrieval Building. The cargo container contains switchgear that has been used for temporary power to the retrieval and treatment buildings.

Telecom Shed: A wooden shed measuring approximately 10 ft. by 10 ft. is placed east of the Administration Trailer and houses telecommunication conduits and wiring.

Telecommunication Lines: Reference Drawing 439461, Rev. 8. The 100 pair line BKTH-100 1, 601-700, and associated downstream pedestals and extensions shall be protected from damage and shall remain in place; including but not limited to lines associated with PEDs #6, #7, lines to the Engineering Barrier Test Facility, and Pit 9 #2 Terminal 1, 651-675.

BKTH-200 1, 1501-1700 shall be pulled back from the point where it crosses the pipe rack, just west of the Cooling Tower, to the concrete hand hole (HH) that lies just north of the berm and southwest of the Cooling Tower, coiled and left in the HH for future use. The wire from the large reel of wire that rests just outside HH can be pulled back to the reel (it is not connected at its termination in WMF-609), as can the smaller co-located reel of cable.

There are fiber optic lines that pass through HH, COMM-HH-DA01 and COMM-HH-DA02, which proceed in a line westward, north of the berm, and support ongoing operations in the SDA. These lines, and associated hand holes, shall be protected from damage and shall remain in place.

Note: INL Telecommunications shall be contacted, by the Pit 9 D&D Contractor, for field verification of any lines that are being removed, or otherwise modified, to ensure that active or needed lines are not erroneously taken out of service.

Concrete pads: Several small concrete pads and walkways are placed in various locations in the Administration Area, and shall be removed.

Sanitary Sewer System: The sanitary sewer system is to be taken out of service. Manholes shall be backfilled to preclude future cave-ins or subsidence. The sewer line

shall be terminated, capped, or flanged closed at a point downstream of the Administration Area and upstream of the RWMC Operations Area.

Well & Well House: To remain in place. The pipeline to the storage tank shall be flanged closed at a point inside the well house and downstream of the sample tap (refer to Drawing 1270-C-171 R 2).

SECTION C - ATTACHMENT B - DESCRIPTION OF INSIDE THE SDA

DOE believes the following descriptions and documentation provided represents the most recent and appropriate documentation available for the sites/facilities identified in this Task Order.

RETRIEVAL BUILDING

Steel frame building, with approximate overall dimensions of 262 ft. by 102 ft., by 73 ft high (above ground surface). The primary retrieval enclosure has approximate dimensions of 223-1/2 ft. by 73-1/2 ft. by 66 ft (above skid rails). There is approximately 22,500 s.f. of roof surface, with a total volume of approximately 910,000 c.f., with interior and exterior steel siding of approximately 50,000 s.f. each, and approximately 73,000 s.f. of insulation. Building rests on steel skid beams, or rails, and spans the width of Pit 9; the building was designed to be moved along the rails to access and remove waste from the pit. Between the rails, the building has no floor and is open to the ground below, part of which is within the boundary of Pit 9. The building contains several large blowers, and associated air filtration systems, as well as dry chemical and foam fire protection systems. The waste transfer system includes trolley rails and carts, soil/waste conveyors, and a soil fill hopper in the Soil Dock. Sixty feet of the Retrieval Structure, and an additional seventeen feet of the Soil Dock are cantilevered beyond the western most skid rail. **Caution! Due to the self-supporting nature of the Retrieval Building, the structural members of the exterior walls are highly stressed. Relieving the stress may be warranted prior to attempting to dismantle the walls.**

The steel skid rails rest upon concrete footings, or runways. The steel rails are to be removed, the concrete foundations shall remain in place. Intrusion into the soil between the rails shall be avoided; clean fill, or cribbing material may be placed as needed to better support construction (demolition) equipment or scaffolding. There is overburden soil placed over the waste in Pit 9, which offers some protection against unintentional intrusion into the waste; the depth of overburden varies. Intrusion into the waste shall be prevented. **Caution! During construction there were reports of external contamination when workers, or equipment strayed from the emplaced cribbing or clean fill and on to the Pit 9 overburden soil.** The existing cribbing, on the south side of the Retrieval Building, shall remain in place. If additional cribbing is placed by the Pit 9 D&D Contractor, it shall be removed following D&D of the building.

Seven Bridge Cranes of varying capacity and elevation span the width, and travel the length of the retrieval enclosure. Five overhead box hoists and a waste return hopper reside in the Box Transfer area.

With the exception of the skid rail concrete footings, the entire Retrieval Building, its contents, and appurtenances shall be removed from the building site, and either salvaged or disposed. Particular care shall be given to the removal of the east most steel rail where it underlies firewater lines that crossover the rail and into the GEM facility; if need be, part of the rail may be left in place rather than risk damage to the lines.

REMEDIATION TREATMENT FACILITY (RTF) BUILDING

Originally designed to process soil, waste, and debris retrieved from Pit 9, the RTF Building includes approximately 104,500 s.f. of floor space, with a combination of steel frame and reinforced concrete construction. Construction was never complete, and though some equipment was installed, very little remains. The central processing area is constructed of reinforced concrete, is approximately 80 ft. wide, 330 ft. long, and rises approximately 62 ft. above grade. The floor of the Melter Cell is 10 ft. below grade, and the floor of the Conveyor Shaft is 17 ft. below grade.

Approximate Square Footage Summary	
First Floor	82,000
Second Floor	20,000
Mezzanines	2,500

Though several bridge cranes were planned, and may appear on drawings, only the Box and Drum Storage area bridge crane is in place. Eleven large Heating, Ventilation, and Air Conditioning (HVAC) units are in place on the roof of HVAC Room, and 19 High Efficiency Particulate Air (HEPA) Filter Banks are in place on the first and second floor HVAC Rooms. A significant quantity of large diameter stainless steel ductwork is in place throughout the building. A significant amount of electrical switchgear is installed, and blowers ranging from 25 to 100 horsepower, are installed or located within the building. The roof was never completed, but a temporary roof covers the building.

The Remediation Treatment Facility (RTF) shall be taken to grade. Removal of on grade floor slabs, or below grade foundations is not required. Below grade cells, shafts, or trenches, shall be backfilled to grade to reduce the potential to collect water, and to eliminate fall and tripping hazards. Floor drains and other open drain lines shall be plugged to preclude the inflow of water. Manholes and wastewater holding vaults shall be backfilled to preclude future cave-ins or subsidence. Storm water drainage features shall remain as is to allow the continued drainage of precipitation from the project site. Any remaining on grade structure shall be left in a stable condition that minimizes tripping and fall hazards to future site workers.

OTHER FEATURES INSIDE THE SDA

Bulk Reagent Holding Tanks: Located north of the treatment building, but south of the SDA berm, are five chemical/reagent holding tanks placed in three high curbed concrete foundations with dimensions of approximately 15 ft. by 27 ft., 18 ft. by 18 ft., and 27 ft. by 41 ft. As the foundations reside south of the SDA berm, the curbs shall be taken to grade and the slabs left in place.

Yard Lighting along eastern side of Remediation Treatment Facility: Three light poles are too close to RTF to maintain during D&D. The Pit 9 D&D contractor will remove at grade and dispose.

LMAES/CWI facilities boundary fence: The existing fence along the SDA access road to the south of the RTF, and between the LMAES Pit 9 facilities and the GEM project area, needs to be relocated to provide sufficient space to D&D the LMAES Pit 9 facilities and to allow suitable access to GEM by RWMC Operations. The Pit 9 D&D Contractor shall establish a suitable construction area boundary fence of similar quality to the existing fence between the SDA road south of the ditch and the Pit 9 project site. The fence should be located north of the drainage ditch and with sufficient space to allow RWMC Operations to access and maintain the ditch. It should extend to the west Retrieval Building skid rail, while leaving sufficient access to the GEM facility by RWMC Operations. Upon completion of the project, the Pit 9 D&D Contractor shall remove the construction area boundary fence. The security fence that bounds the Administration Area shall remain in place.

Pit 9 Area drainage features: All Pit 9 Area storm water drainage features, both within the SDA and north of the berm, shall be left as is, any damage to the drainage features caused by D&D activities shall be repaired. Standing water in the RTF below-grade cells or trenches may be pumped to the storm drains located near the building.

NAT-10 Monitoring Well: This small diameter monitoring well is located between the Remediation Treatment Facility and the fence bounding Pit 8 (to the west of the RTF), and is currently protected by two large concrete blocks. CWI plans to close this well, as it has no future use. If not closed before D&D, it need only be protected to the degree that it can be located and closed at a future date.

Nesting Owls: Owls have been known to nest in the upper reaches of the open steel of the RTF (on the South central end of the building). Activity at the building or actions taken to preclude access to the nest may encourage the owls to nest elsewhere. **The owls are protected by the Migratory Bird Treaty Act.**